

**Request for Proposals
Town of Arlington
Wellington Park and Mill Brook Corridor Revitalization
Phase 3 - Design and Permitting
November 21, 2019**

RFP #19-62

The Town of Arlington invites proposals from qualified landscape architecture/engineering/other firms for the design and permitting of a park pathway, activated park along Mill Brook, and park amenities for Wellington Park in Arlington. The Town is seeking a landscape architecture and engineering team to improve the ecological quality and public access amenities along the Brook. Qualified firms are requested to submit their proposals to the Purchasing Officer at the Town Hall, 730 Massachusetts Ave., Arlington, MA, in accordance with the instructions contained within this Request for Proposals (RFP).

Notice of this RFP is published in the Central Register and Commbuys, and is posted on the Town website (www.arlingtonma.gov/purchasing).

The Town will accept proposals delivered in person or by mail. All proposals must be received by **Wednesday, December 18th, 2019 at 1:00 pm** to be considered. Proposals submitted by fax or by electronic mail will not be considered. All proposals must be submitted to:

Mr. Domenic Lanzillotti, Purchasing Officer
Arlington Town Hall
730 Massachusetts Ave.
Arlington, MA 02476

The available budget for the project is \$100,000 including all fees related to feasibility, design, permitting, and public engagement.

Proposal Package available for Download: www.arlingtonma.gov/purchasing

Project Background and Goals

For decades, the Town of Arlington has been exploring the feasibility and possibilities for developing a linear park along Mill Brook, an important ecological and historical feature in the town. At one time, there were nine mills and seven millponds along the brook, which flows eastward from the Arlington Reservoir to Lower Mystic Lake and is part of the Mystic River Watershed. Four Town-owned recreational and conservation areas are accessible along Mill Brook— Reservoir/Hurd Fields, Wellington Park, Cooke’s Hollow, and Meadowbrook Park.

The Mystic River Watershed Association (MyRWA) and the Town of Arlington have been leading a participatory design and planning process to create a continuous path along Mill Brook, beginning with the Town-owned parcel, Wellington Park. We hope that this design solution will provide a blueprint for other sections of Mill Brook, encouraging public access and development that takes full advantage of the natural features of this waterway. The goals of this project include:

- Complete a community-driven design for Wellington Park that will open up the Brook and provide new amenities.
- Build awareness and support for the concept of a Mill Brook Linear Park and provide a template for enhancement and restoration of other sections of this corridor.
- Use environmentally sustainable planning and engineering approaches for natural resources management, including invasives species removal and management.

In Phase 1 of this project, MyRWA received Arlington CPA funds to explore feasibility and designs for the Mill Brook Corridor in the area between Brattle Street and Grove Street, with a focus on the Wellington Park section of the area (see map in appendix). In Phase 2 of this project, MyRWA and the Town of Arlington co-managed a design and construction project to improve the flood resiliency of Wellington Park and complete a portion of the original schematic design (see report in the appendix). Capital funding for Phase 2 was funded through the State's Municipal Vulnerability Preparedness (MVP) Grant Program.

This RFP is for design services for Phase 3 of this project, the final implementation phase for Wellington Park. See the appendix for all work completed to date. We anticipate that capital funding will come from the Arlington Community Preservation Act and other foundation funding sources.

Scope of Services

The following scope of services is intended to serve as a guide for Consultants in preparing their respective technical proposals and shall include, but not be limited to, the tasks described below for Wellington Park in Arlington.

1. 100% Design and Construction Drawings – design and construction bid documents to build the final phase of Wellington Park. The designs will be based on the schematic design from the original plan, supplemented by the “as-built” drawings for the first phase of construction, and the original site survey and soil tests. The main park amenities that are part of this design phase are as follows (see schematic design and phased plan in appendix for location and further details):
 - a. Existing bridge retrofit for ADA accessibility and to address structural/aesthetic issues;
 - b. Create an ADA-compliant pathway from new boardwalk to existing bridge. There may be some boardwalk components or other pathway materials – this will be explored during the early stages of this design effort;
 - c. Planting plan for the whole park with a focus on the entrance and area alongside the new path and landscape amenities (benches, picnic table(s), bike rack etc.);
 - d. A “Natural Play Area”. The schematic design depicts a “natural play area.” Develop a cost-effective design for an area that uses natural materials and serves as a seating and unstructured play area that connects people to Mill Brook along the southern bank of the park, and;
 - e. Incorporate design elements that educate the public on where current and future flooding within the park occur. The goal of these design elements is to expand the education about flooding in the park through identifying probable flooding locations and depths of water.
2. Permitting – in collaboration with the Arlington Conservation Agent, initiate and complete for project implementation from various local, state, and federal authorities as necessary.
3. Construction Cost Estimate – develop cost estimate, with a detailed estimate prior to the contractor bid process.

4. Meetings and Public Engagement – In addition to the work to produce these deliverables, the consultant will participate in a site tour at project kick-off and present at 2 public meetings, with 1 iteration of the concept design based on feedback from the first public meeting.

Note: it is anticipated that the construction administration fees will be covered by a CPA grant and other foundation grants for capital costs.

Project Timeline

- CPA Application for Next Phase of Work: December 2019 (MyRWA to lead)
- Select Consultant/Notice to Proceed: January 2020
- Community Outreach: February 2020-May 2020 (MyRWA to lead)
- First Public Meeting: March 2020
- Second Public Meeting: May 2020
- Complete Design/Construction Documents: June 2019
- Final construction capital budget (CPA and foundation grants): April 2020
- Construction Administration: Summer/Fall 2020

Client Team

Town of Arlington
Mystic River Watershed Association
Open Space Committee
Mill Brook Working Group
Conservation Commission
Park and Recreation Commission

Appendix

- [1] Phase I Feasibility and Concept Design Report
- [2] Phase II and Future Extension Plan
- [3] Community Input Summary

Note: “As-builts” for Phase II will be available in January 2020.

Questions, Addenda, or Proposal Modifications

Questions/inquiries concerning this RFP must be submitted in writing to: Emily Sullivan, Environmental Planner & Conservation Agent, Arlington Town Hall, 730 Massachusetts Avenue, Arlington, MA 02476, or they may be emailed to esullivan@town.arlington.ma.us. Questions/inquiries must be received by Monday, December 9th, 2019 at 4:00pm to be considered. Questions/inquiries may be delivered, mailed, or emailed. Written responses will be posted on the Town’s website (www.arlingtonma.gov/purchasing) by addendum by Wednesday, December 11th, 2019 at 4:00pm.

Modifications to Proposal

An applicant may correct, modify, or withdraw a proposal by written notice received by the Town prior to the time and date set for the proposal opening. Proposal modifications must be submitted in a sealed envelope clearly labeled “Modification No. ____.” Each modification must be numbered in sequence, and must reference the original RFP.

Pre-Proposal Briefing

A briefing will be held on Thursday, December 5th, 2019 at 2:00pm at the entrance to Wellington Park, 35 Grove Street, Arlington, MA 02476.

Submittal

Three (3) copies of technical proposal and a USB drive with the technical proposal in searchable PDF format must be submitted in a sealed envelope marked “RFP #19-62 – Landscape Architect/Wellington Park and Mill Brook Corridor Revitalization/Phase 3/Design & Permitting - Technical Proposal” and one (1) copy of the price proposal in a sealed envelope marked “RFP #19-62 – Landscape Architect/Wellington Park and Mill Brook Corridor Revitalization/Phase 3/Design & Permitting - Price Proposal”.

Technical Proposal to include:

1. Written proposal and timeline that fits with for the scope outlined above. Include initial ideas on the project, general approach to the tasks outlined and how you plan to engage the client in the design process.
2. Portfolio- 3-5 projects similar in nature to this project, include client and budget.
3. Key personnel and qualifications.

Minimum Criteria/Qualifications

Each applicant must demonstrate that it meets the following minimum qualifications:

- a) The applicants shall have expertise in the following disciplines: landscape architecture, bioengineering, surveying, civil engineering, wetland science, soil science, civic engagement, environmental permitting, and state and federal ADA regulations and compliance. Specific experience with park redevelopment, habitat restoration, and path design/development preferred.
- b) The applications should have a cost-effective approach to this work; the scope is currently budgeted for \$100,000.
- c) The applicant must have a clear understanding of the project goals and must describe a sound approach for achieving them
- d) The individual or principal overseeing the project must be a person who is registered by the Commonwealth of Massachusetts (or an equivalent registration entity) in her/his field(s) of expertise, and who has at least five (5) years of professional experience in this field or these fields. In documenting this qualification, the applicant must describe the professional background of the firm and the extent of previous experience of firm personnel or consultants to be assigned to the project, and must identify the anticipated role that each will play in the project.
- e) The applicant must have knowledge of, and experience with, applicable legal and administrative requirements, procedures, and practices.

- f) The applicant must possess all necessary licenses and registrations, either within the firm or through independent consultants, to qualify under Massachusetts' law to undertake this project.
- g) The applicant must provide evidence of insurance for general liability, automobile, worker's compensation (statutory), and professional services liability, as required.
- h) The applicant must provide a detailed description of at least one recent similar project for which the applicant has performed similar services; project references must be identified. Further, individuals who worked on the project must be identified, and it must be stated whether these individuals would be assigned to this project.
- i) The applicant must not be debarred under MGL c149, §44C or disqualified under MGL c7, §38D.
- j) The applicant must submit all required statements and forms.

Comparative Evaluation Criteria

All proposals meeting the minimum criteria/qualifications will then be evaluated based upon the specific comparative evaluation criteria. The following point schedule will be utilized:

Highly advantageous

5 points Response excels on the specific criterion

Advantageous

3 points Response meets evaluation standard for the criterion

Least Advantageous

1 point Response does not fully meet the criterion or leaves a question or issue not fully addressed

Does Not Meet

0 points * Does not address the criteria

* Proposal is automatically eliminated from further consideration if "0 points" is received for any category.

Project Management Experience on Similar Projects:

Successful experience of the applicant in the role of project manager for similar projects in the Commonwealth of Massachusetts over the last five (5) years, with samples from similar projects:

- Experience completing five (5) or more similar projects will be considered Highly Advantageous (5 points)
- Experience completing three (3) but less than five (5) similar projects will be considered Advantageous (3 points)
- Experience completing one (1) but less than three (3) similar projects will be considered Least Advantageous (1 point)
- No experience with similar projects will be considered Does Not Meet (0 points and elimination from further consideration)

Project Oversight:

Ability of the applicant to begin work in a timely manner and to maintain the project timetable, and to oversee the work in an efficient and cost-effective manner:

- Ability to devote sufficient resources to completing the project according to the Town's timetable, and availability by the beginning of November 2019 to begin work will be considered Highly Advantageous (5 points)
- Potentially unsatisfactory ability to devote sufficient resources to completing the project and to meeting the project timetable, and availability by the beginning of November 2019 to begin work will be considered Advantageous (3 points)
- Limited project oversight ability, but potentially able to devote sufficient resources to completing the project in accordance with the project timetable, and availability by November 2019 to begin work will be considered Least Advantageous (1 point)
- Insufficient project management experience and insufficient resources to meet the project's timetable will be considered Does Not Meet (0 points and elimination from further consideration)

Team and Key Staff:

Qualifications and involvement of key personnel to be assigned to this project and the experience of such personnel in relation to successfully completing similar projects:

- Key staff that have at least seven (7) years of relevant experience or an individual within the firm having nine (9) years relevant experience will be considered Highly Advantageous (5 points)
- Key staff that have at least five (5) years of relevant experience or an individual within the firm having seven (7) years relevant experience will be considered Advantageous (3 points)
- Key staff that have at least five (5) years of relevant experience or an individual within the firm having at least five (5) years relevant experience will be considered Least Advantageous (1 point)
- Key staff that have less than five (5) years of relevant experience or an individual within the firm having less than five (5) years relevant experience will be considered Does Not Meet (0 points and elimination from further consideration)

Quality of References:

References will be evaluated to identify the ability and quality of the applicant's previous work over the last five (5) years:

- Favorable references regarding five (5) or more previous contracts will be considered Highly Advantageous (5 points)
- Favorable references regarding three (3) but less than five (5) previous contracts will be considered Advantageous (3 points)
- Favorable references from one (1) but less than three (3) previous contracts will be considered Least Advantageous (1 point)
- No favorable references will be considered Does Not Meet (0 points and elimination from further consideration)

Quality of Written Materials:

Responses will be reviewed to determine relative quality, readability, responsiveness to the RFP, and understanding of the project:

- Proposals that organize the response according to the minimum and comparative criteria in the RFP, make it easy to evaluate the response, communicate a high-quality, efficient, and cost-effective work plan, and demonstrate an understanding of this project will be considered Highly Advantageous (5 points)

- Proposals that do not organize the response according to the minimum and comparative criteria, but which communicate a high-quality, efficient, and cost-effective work plan, and which demonstrate a clear understanding of this project, will be considered Advantageous (3 points)
- Proposals that do not demonstrate a clear understanding of this project, and have multiple spelling and/or grammatical errors will be considered Least Advantageous (1 point)
- Proposals that simply reiterate the preliminary scope of services, do not demonstrate a clear understanding of this project, and have multiple spelling and/or grammatical errors will be considered Does Not Meet (0 points and elimination from further consideration)

Awarding of Contract

The Town may schedule interviews with the three highest scoring applicants. The Town will rank the finalists based on consideration of the minimum criteria/qualifications, the comparative evaluation criteria, and the interview (if applicable).

The Town will begin discussion of final scope of services and fee negotiations with the top ranked applicant. If unsuccessful in the negotiations, the Town may attempt to negotiate with the next highest scoring applicant (and repeat that process) until successful. If negotiations with one or more of the finalists prove unsuccessful, the Town may reject all responses and may choose to re-advertise if deemed in the Town's best interest. The selected applicant will be required to execute the Town's *Contract for Project Management Services*. It is the Town's intent to finalize and execute all contract documents with the selected applicant by January 17th, 2020.

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity, or group of individuals.

(Signature of individual submitting bid or proposal)

(Name of individual submitting bid or proposal)

Name of Business

Date

Pursuant to M.G.L. Chapter 62C, Section 49A, I certify under the penalties of perjury that I have complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Social Security Number or
Federal Identification Number

Signature of Individual or Responsible
Corporate Officer and Title

**NON-COLLUSION FORMS
MUST BE SIGNED AND
SUBMITTED WITH BID**

Mill Brook Corridor and Wellington Park Revitalization Project Summary

August 2018

100% Schematic Design Final Report



Prepared by:

Weston & Sampson

Cover Photo by Elise Bluell, Weston & Sampson

TABLE OF CONTENTS

Acknowledgements	Page 4
Project Summary	Page 5
Existing Conditions: Initial Environmental Assessment Plan (May 11, 2018)	Page 6
Existing Conditions: Vegetation Cover Plan (May 11, 2018)	Page 7
Environmental Assessment: Invasive Species and Bank Erosion Investigation	Page 8
Environmental Assessment: Invasive Species and Erosion Areas Plan (April 2018)	Page 12
Environmental Assessment: Geotechnical Investigation	Page 13
Environmental Assessment: Geotechnical Investigation Map (April 2018)	Page 21
Environmental Assessment: Permitting Considerations	Page 22
Environmental Assessment: Examples of Brook Intervention Details	Page 26
Existing Conditions Analysis Plan (On-Site Workshop, April 14, 2018)	Page 27
Design Intent / Opportunities Plan (On-Site Workshop, April 14, 2018)	Page 28
Corridor Path Feasibility Plan (June 29, 2018)	Page 29
Wellington Park Schematic Design Plan (August 2018)	Page 30
Wellington Park - Grove Street Entrance Perspective Sketch (June 2018)	Page 31
Wellington Park - Park Interior Perspective Sketch (June 2018)	Page 32
Schematic Cost Estimate	Page 33
Funding Sources for Implementation and Maintenance	Page 34

AVAILABLE RESOURCES (FROM TOWN OF ARLINGTON)

- Public Meeting Presentations, 2018
- Online Public Survey Results, 2018
- Mill Brook Evaluation DRAFT, 2017
- Mill Brook Linear Park Report, 2010
- Mystic River Master Plan Report, 2009
- Mill Brook Linear Park Report, 1976

ACKNOWLEDGEMENTS

This project was made possible through the support of the Town of Arlington Community Preservation Committee and generous funding through the Arlington Community Preservation Act.

With gratitude, we recognize the Town of Arlington's dedicated Steering Committee members, each of whom participated in this effort. Their commitment to Mill Brook Corridor and Wellington Park will yield positive benefits for all residents of the Town of Arlington for generations to come.

Amber Christoffersen, Mystic River Watershed Association

Lela Shepherd, Environmental Planner / Conservation Agent

Nat Strosberg, Senior Planner

Ann LeRoyer, Open Space Committee

Don Vitters, Park and Recreation Commission

Don Topaz, Resident

Jerry Clabaugh, Resident

Sarah Tuttle, Resident

Thanks to the Arlington community who expressed their thoughts and insights and to the many representatives of other Town departments and committees who provided guidance.

Cheri Ruane, RLA, ASLA

Jeanne Lukenda, ASLA

Elise Bluell, Associate ASLA

Farah Dakkak, Associate ASLA

Weston & Sampson

August 2018

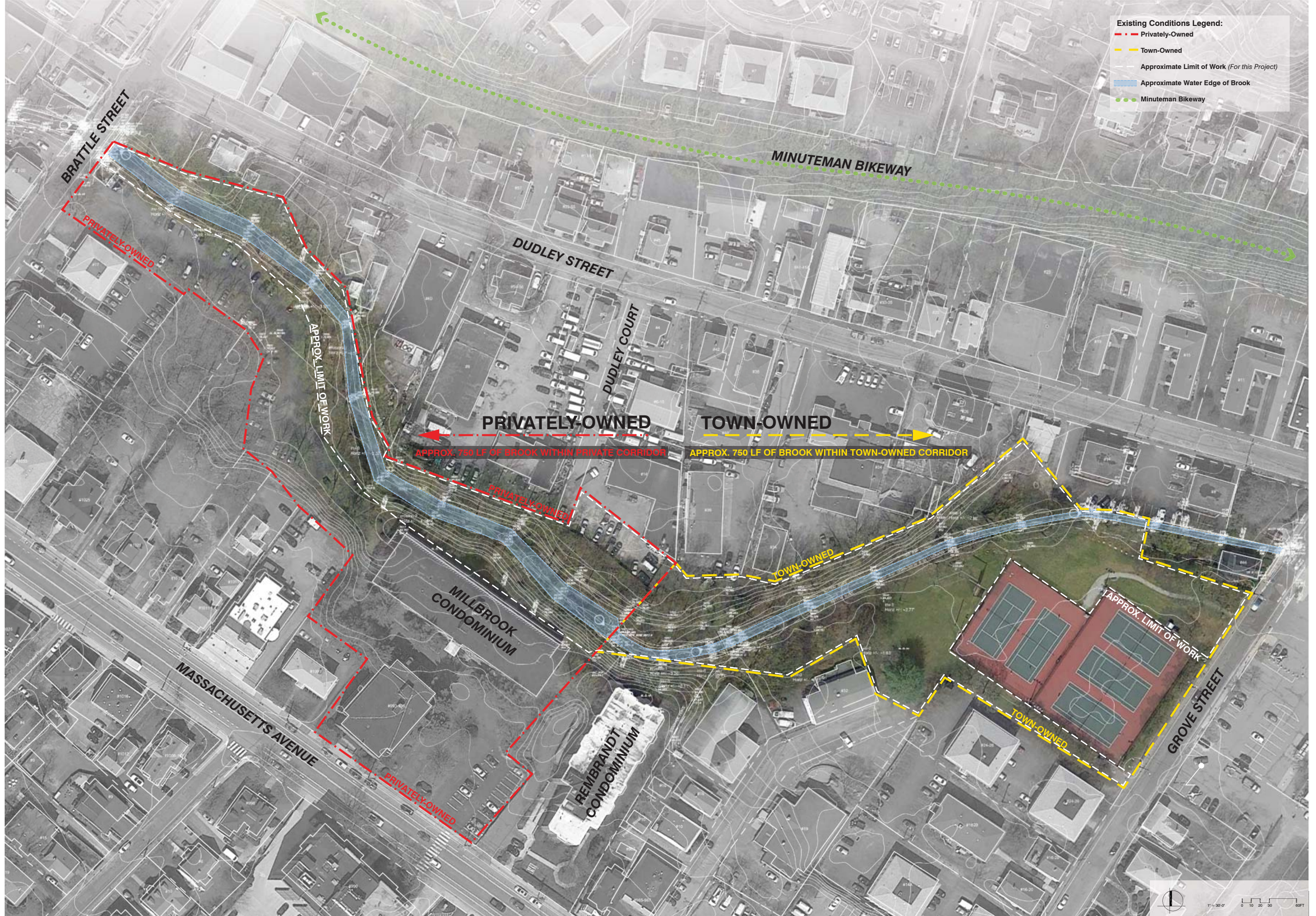
PROJECT SUMMARY

The Town of Arlington and the Mystic River Watershed Association are developing a Schematic Design and Environmental Restoration Plan for Wellington Park and the Mill Brook Corridor segment between Grove and Brattle Streets. The primary purpose of this project is to explore and identify opportunities for improving public access amenities and the ecological quality of this park and the Brattle-Grove Streets portion of the corridor. Funding has been provided by the Arlington Community Preservation Act managed by the Town of Arlington Community Preservation Committee and approved by Town Meeting.

Weston & Sampson was retained for this project by the Town of Arlington in the fall of 2017. The team focused on developing improvements that reflect the needs of this diverse community, and creating a Plan that will serve as a guide for all future improvements of this park and brook segment, as well as a tool to strategize for funding opportunities. Developed as a pilot project with broad-scale potential impact, it identified public access and ecological improvements that can be applied to other segments along the entire corridor of Mill Brook.

The scope of work undertaken by Weston & Sampson included:

- Review, evaluation, and validation of the prior planning concepts completed by various stakeholder groups including the Mystic River Watershed Association.
- Compilation of base map data showing project boundaries and Town of Arlington owned land (land survey to be done during a future phase of work).
- Assessment of general environmental conditions.
- A robust public engagement process in order to solicit public input, foster dialogue, and build consensus about future actions and implementation plans.
- Establishment of a compelling schematic-level design, to be validated and endorsed through steering committee and public dialogue.
- A final preferred plan that is reflective of the physical capacity of the property and the Town's ability to operate and manage the property going forward.
- Establishment of a strong and achievable implementation and funding strategy with prioritized phases for implementation of improvements.



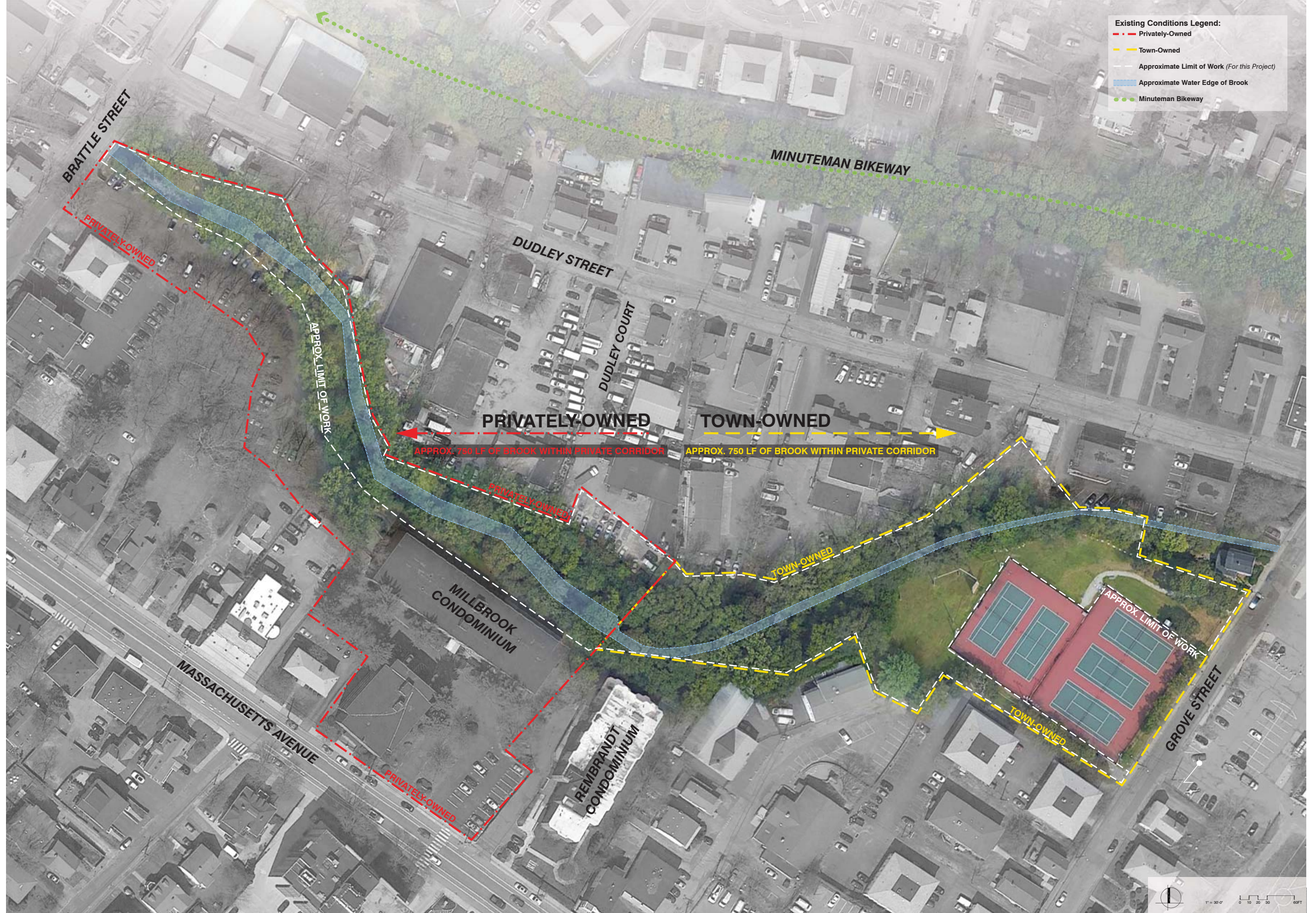
Mystic River
WATERSHED ASSOCIATION

EXISTING CONDITIONS / INITIAL ENVIRONMENTAL ASSESSMENT

MILL BROOK CORRIDOR AND WELLINGTON PARK REVITALIZATION PROJECT

11 MAY 2018 - 75% SCHEMATIC DESIGN SUBMISSION

Weston & Sampson
design studio



Existing Conditions Legend:
 - - - Privately-Owned
 - - - Town-Owned
 - - - Approximate Limit of Work (For this Project)
 - - - Approximate Water Edge of Brook
 - - - Minuteman Bikeway

ENVIRONMENTAL ASSESSMENT: INVASIVE SPECIES AND BANK EROSION INVESTIGATION

On April 10, 2018, the presence of invasive species and bank erosion areas was investigated at Wellington Park and along Mill Brook, between Grove Street and Brattle Street. A GPS unit was used to locate these areas, and data points can be seen on the attached map (Figure 1). Further discussions concerning invasive species and erosion areas at the site are presented below.

Invasive Species

A total of six areas containing invasive species were identified (see Figure 1). Some of the invasive species identified at the site included:

- Japanese knotweed (*Fallopia japonica*)
- Asian bittersweet (*Celastrus orbiculatus*)
- Multiflora rose (*Rosa multiflora*)
- Japanese barberry (*Berberis thunbergii*)
- Garlic mustard (*Alliaria petiolate*)

The most dominant invasive species, by far, was Japanese knotweed (*Fallopia japonica*). The largest patch of knotweed was located at the western edge of Wellington Park (see Photo 1). GPS points Inv-1 through Inv-4 were used to identify the outer limits of this knotweed patch. This area was approximately 6,800 square feet (sf), or 0.16 acres.

Longer, thinner patches of knotweed were located along the bank of Mill Brook. These smaller patches were located along both the southern bank (between Inv-5 and Inv-6 (500 sf), Inv-9 and Inv-10 (2,700 sf)) and the northern bank (between Inv-7 and Inv-8 (900 sf), and at the Brattle Street culvert (800 sf – see Photo 2). GPS points were not taken near the Brattle Street culvert due to access issues.

One additional area was noted on the northern bank, with GPS point Area-1 taken at the middle of this area. This area did not have one dominant invasive species, but rather a small number of different species, with the overall area being dominated by invasive species. The invasive species in this area included Japanese knotweed (*Fallopia japonica*), Multiflora rose (*Rosa multiflora*), and Garlic mustard (*Alliaria petiolate*).

Multiflora rose was frequently seen along the northern bank, east of the foot bridge, but large patches were not noted.

Asian bittersweet was noted along the southern bank of the brook at Wellington Park.

Bank Erosion Areas

A total of four bank erosion areas were identified (see Figure 1). Three of these locations are on the southern bank (GPS points Erosion-1, -2, and -4) and one of these locations (Erosion-3) is on the north bank.

Erosion-1 is located on the southern bank just west of the foot bridge. The bank has been armored, but erosion in this area has broken through the stone/cement bank. A steep slope is immediately upgradient of this erosion area. (See Photo 3 for this erosion area.)

Erosion-2 is on the southern bank, further west of Erosion-1. This is a natural, steep bank with evidence of sloughing, making the bank unstable.

Erosion-3 is on the northern bank, further west of Erosion-2. This bank is near vertical on the edge of the stream and consists of man-made material that has not been cemented, bonded, or reinforced in any visible way. This area appears to be very unstable.

Erosion 4 is on the southern bank. This is a natural bank just east of the Brattle Street culvert. Bank sloughing was observed in this location.

All four of the bank erosion areas are located on private property. As such, agreements with the owners would be required before permitting and construction efforts occur.

Conclusions and Preliminary Recommendations

The most dominant invasive species at the site is Japanese knotweed (*Fallopia japonica*). The largest area of knotweed is located on the western edge of Wellington Park and should be the primary focus of any invasive species management plan. It has been suggested that this area might be re-graded to provide additional flood storage. If this were to occur, removing all of the topsoil, along with the knotweed, its root system, and seeds in the soil, would be an optimal method of removal. While this method would include more disruption, it is preferred because virtually all of the invasive plant material would be removed from site with a small probability of regrowth. If regrading does not occur, because of the sheer volume of knotweed, one method that could work well for management is to cut down the knotweed in late May or early June, and then spray a non-glyphosate herbicide in late summer, during the flowering period. Alternatively, the cut and dab method could work. The cut and dab method is considered the preferred management strategy of the Conservation Commission. These management options would need to occur over a several year time period.

Where the knotweed is along the bank in long, thin patches, the cut and dab method would likely work better since there are fewer clumps of plants in these areas. The mowing method likely will not be an option as it may be impracticable to get a machine to these areas.

Asian bittersweet (*Celastrus orbiculatus*) along the southern bank at Wellington Park could be cut and a non-glyphosate herbicide applied to the trunk. Removing the park of this invasive would help uncover the brook to the general public and make for a more attractive park feature.

All four of the erosion areas would benefit from a bank stability project. One such project was conducted on the southern bank of Mill Brook within this limit of work. It was constructed over 10 years ago and remains in excellent condition. (See Photo 4 for this bank stabilization “living wall” structure.)

PHOTOGRAPHS (April 10, 2018)



Photo 1. Knotweed at western edge of Park; winter dormant period shown.



Photo 2. Knotweed at north bank by Brattle Street; winter dormant period shown.

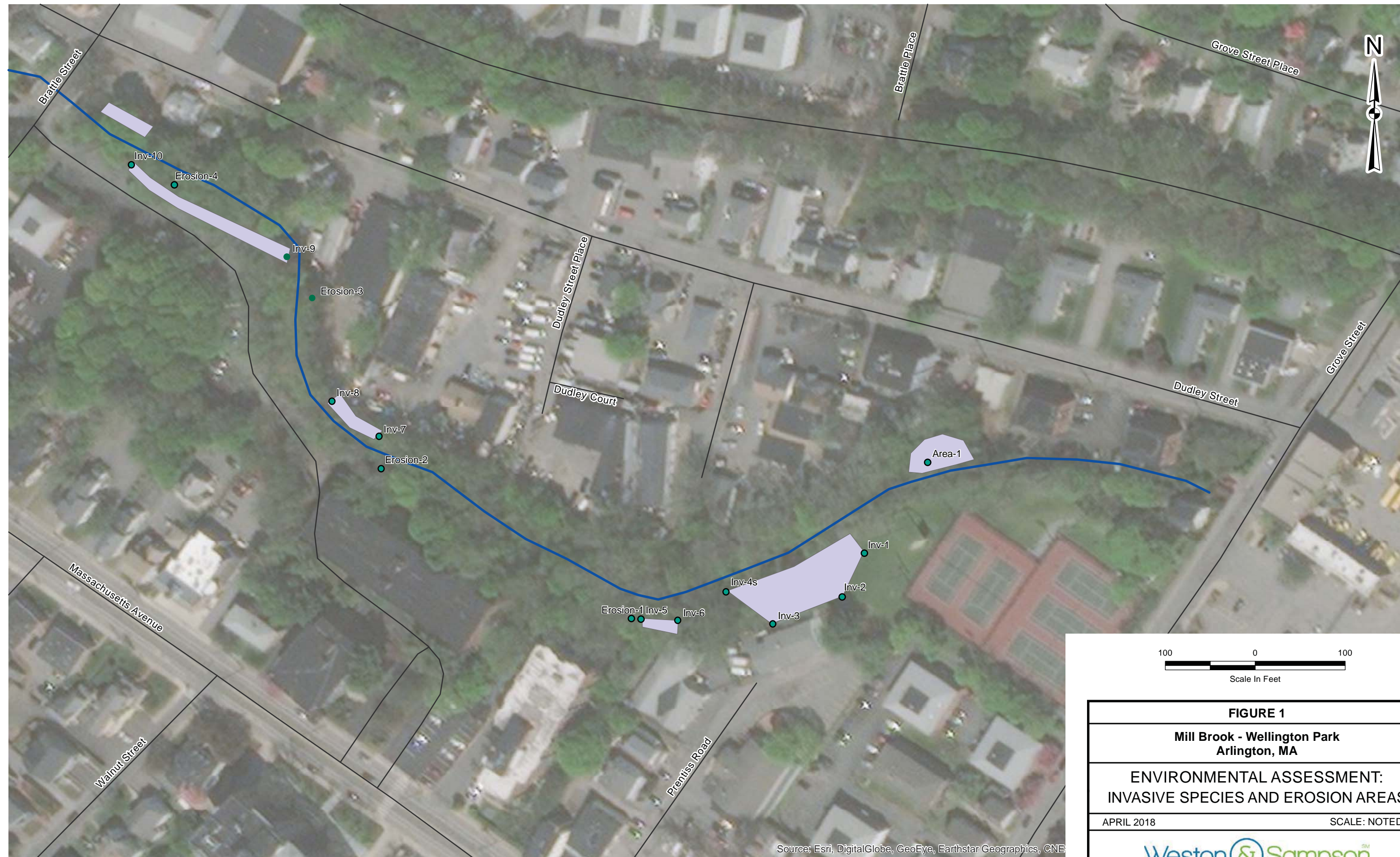
PHOTOGRAPHS (April 10, 2018)




Photo 3. Erosion area west of bridge, southern bank. (Private property)



Photo 4. Erosion control “living wall” project along Mill Brook. (Private property)



100 0 100
Scale In Feet

FIGURE 1	
Mill Brook - Wellington Park Arlington, MA	
ENVIRONMENTAL ASSESSMENT: INVASIVE SPECIES AND EROSION AREAS	
APRIL 2018	SCALE: NOTED
	

<BOL>Path:</BOL> I:\ws03\local\WSEP\Projects\MA\Arlington, MA\2180078 - Mill Brook Corridor & Wellington Park Revitalization (4/17-56)\GIS\maps\inv species and erosion areas.mxd <BOL>User:</BOL> hlgism <BOL>Saved:</BOL> 4/12/2018 1:25:37 PM <BOL>Opened:</BOL> 4/12/2018 12:57:51 PM

ENVIRONMENTAL ASSESSMENT: GEOTECHNICAL INVESTIGATION

A site investigation walk took place on April 10, 2018 with the intention of preliminarily identifying geotechnical considerations related to the proposed work. Based on our understanding of proposed conditions, observations were mainly related to the following:

- areas for possible stormwater storage,
- signs of existing erosion,
- geotechnical issues related to widening the stream bed for water storage, and
- geotechnical issues related to widening the side slopes for pathways.

Areas for Stormwater Storage

Based on visual observation of topography, it appears the section between the footbridge and the “living wall” (which roughly corresponds with the section between “Erosion-1A and Erosion-1B” and “Erosion-2A and Erosion-2B” points (see Figure 2 and Photos 5-10) is most favorable for potential stormwater storage during rain events.

Existing Erosion Areas

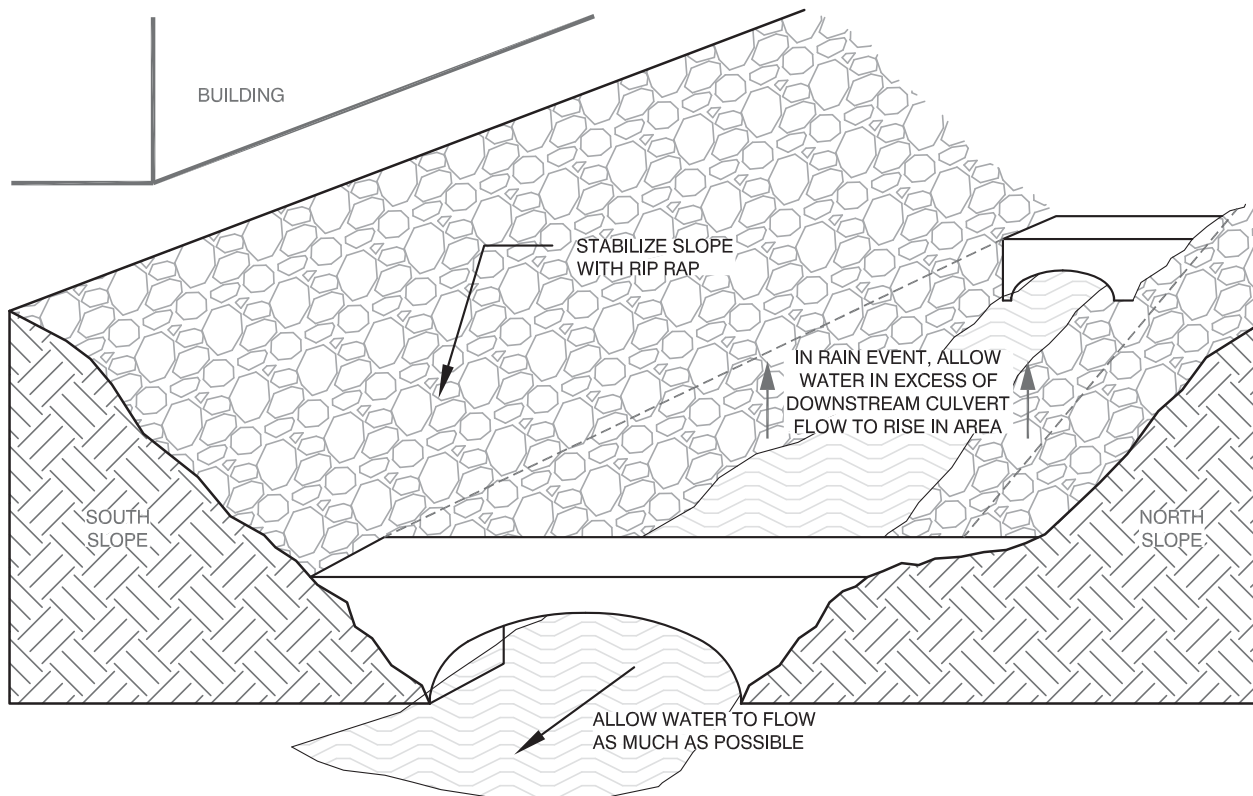
Signs of erosion and scarp were observed at four locations, as shown on Figure 2. Of the four areas, “Erosion-1” and “Erosion-2” located on the south bank were observed to have eroded more significantly than the other two locations. Erosion-2 area is immediately adjacent to and downstream of the “living wall” (see Photo 8). It appears erosion and scarp of the brook bank has advanced downstream of the erosion control “living wall” project, while the “living wall” has performed well against continued erosion. Erosion-1 area is just upstream of the footbridge and is generally located where the brook makes a turn. The erosion appears to be a surficial slope failure, suggesting possible scouring of the bank toe and eventual slope movement. Both locations should be monitored by the property owners for future movement.

Widening the Stream Bed for Water Storage

Based on visual observation of topography and the location of buildings on top of slope, if widening of the stream bed is considered, it should be widened towards the northern bank (see Photo 9). Based on erosion already observed on the southern bank, the toe of that slope should not be altered.

Widening the Side Slopes for Pathways

Based on visual observation of topography and building locations, if a pathway is considered on the northern bank to make a walking path “loop”, there is room for a narrow (± 5 ft.) walkway, with a retaining wall to support the buildings on top of the slope (see Photo 10).



Draft Sketch: Possible Water Storage Option.

PHOTOGRAPHS (April 10, 2018)



Photo 5: Looking west toward “Erosion-1A”. (Private property)

PHOTOGRAPHS (April 10, 2018)



Photo 6: Looking west toward south bank and “Erosion-1B”. (Private property)

PHOTOGRAPHS (April 10, 2018)



Photo 7: Looking south toward south bank and “Erosion-2A”. (Private property)

PHOTOGRAPHS (April 10, 2018)



Photo 8: Looking south-west; “Erosion-2B” adjacent to “living wall”. (Private property)

PHOTOGRAPHS (April 10, 2018)

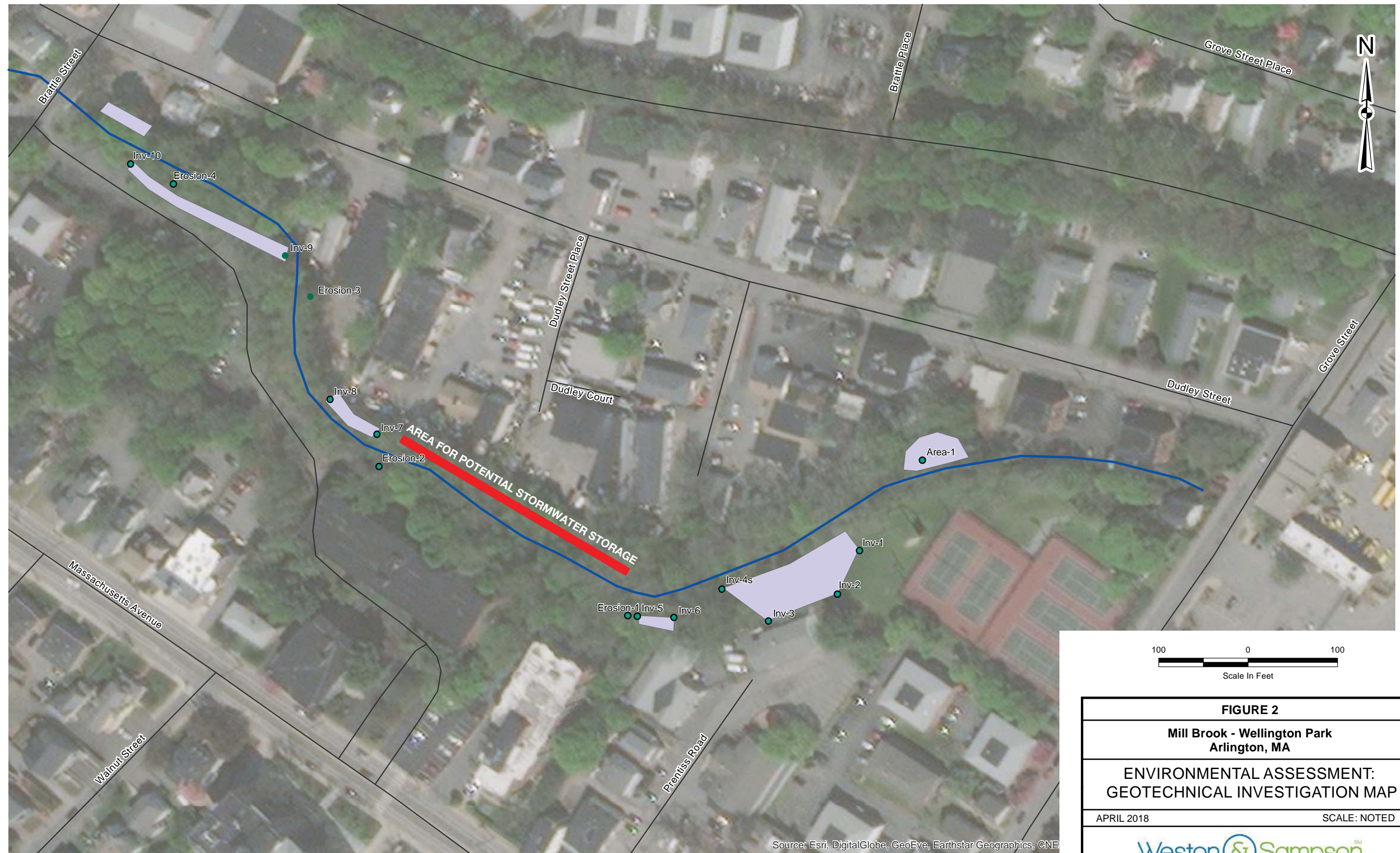


Photo 9: Looking west toward northern stream bed. (Private property)

PHOTOGRAPHS (April 10, 2018)



Photo 10: Looking east toward narrow pathway location.



100 0 100
Scale In Feet

FIGURE 2	
Mill Brook - Wellington Park Arlington, MA	
ENVIRONMENTAL ASSESSMENT: GEOTECHNICAL INVESTIGATION MAP	
APRIL 2018	SCALE: NOTED

ENVIRONMENTAL ASSESSMENT: PERMITTING CONSIDERATIONS

The following initiative would need to be conducted in order to create any flood storage in the invasive species area:

- Identify area for soil removal
- Identify and map any/all utilities in the area, including:
 - o location of utility
 - o depth of utility
 - o location of any manhole structures
 - o document any outfalls in the area
- Identify any other obstructions that may be present that would not allow excavation
- Evaluate impacts to adjacent properties from soil removal
 - o foundations, buildings, parking areas, drainage
- Conduct subsurface investigation to determine material to be removed
 - o test pits/borings
 - o sampling for quality for disposal of soil
- Determine Ordinary High Water (OHW) of Mill Brook
- Determine flood stage/elevation of Mill Brook
- Evaluate river bank of Mill Brook adjacent to storage areas
 - o need to protect/harden area if flood waters are to overtop bank at this location
- Develop invasive species removal plan
- Design flood storage areas
 - o this can be done as a Bordering Vegetated Wetland (BVW) or,
 - o part of the park built below the flood plain elevation but above the wetland zone
- Develop permits for park and flood storage area
 - o this can take on a few forms; if the work is only in the upland, then most likely just a Notice of Intent (NOI) under the Wetland Protection Act and with the Arlington Conservation Commission would be required
 - o if touching the bank and working within the brook, then additional permitting may be necessary, based on impacts

ENVIRONMENTAL ASSESSMENT: EXAMPLES OF BROOK INTERVENTION DETAILS



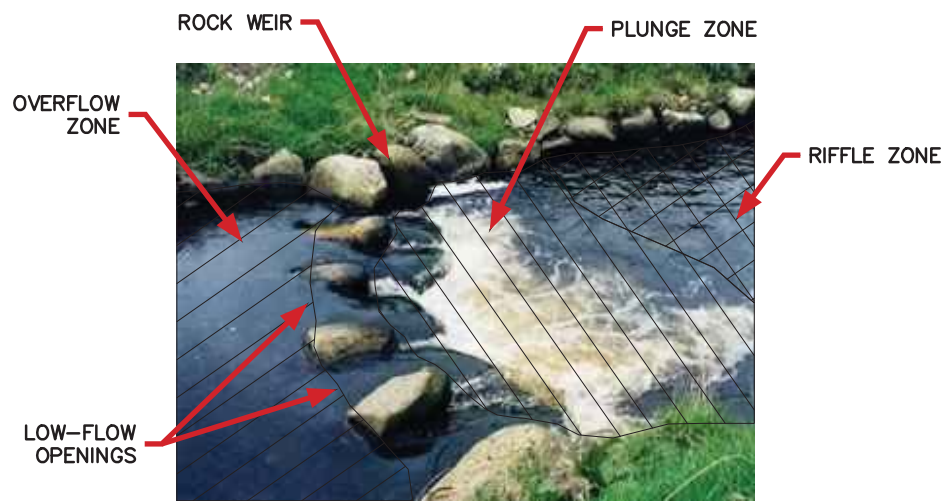
DETAIL 1

ENVIRONMENTAL ASSESSMENT: EXAMPLES OF BROOK INTERVENTION DETAILS



DETAIL 2

ENVIRONMENTAL ASSESSMENT: EXAMPLES OF BROOK INTERVENTION DETAILS

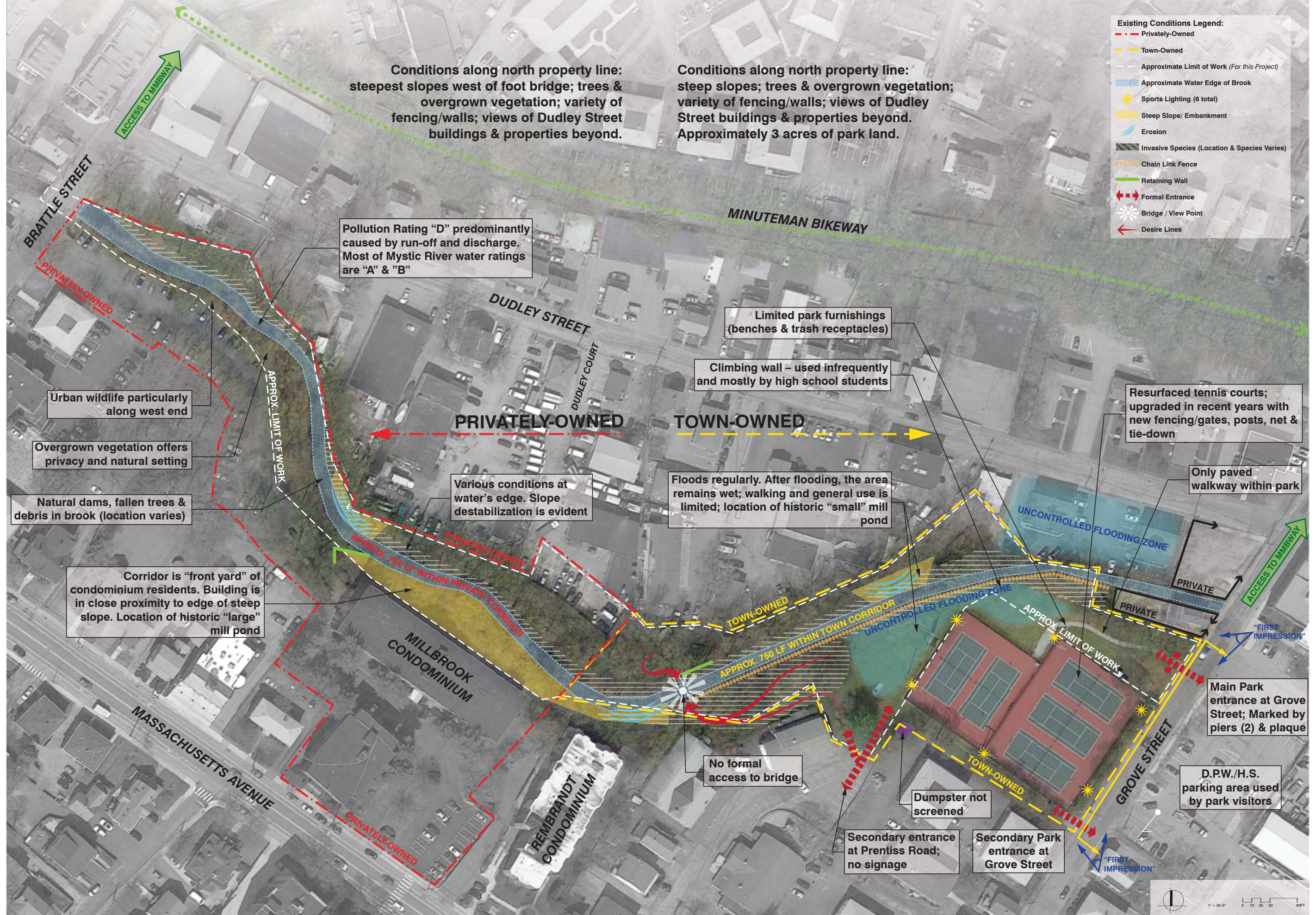


DETAIL 3

ENVIRONMENTAL ASSESSMENT: EXAMPLES OF BROOK INTERVENTION DETAILS



DETAIL 4

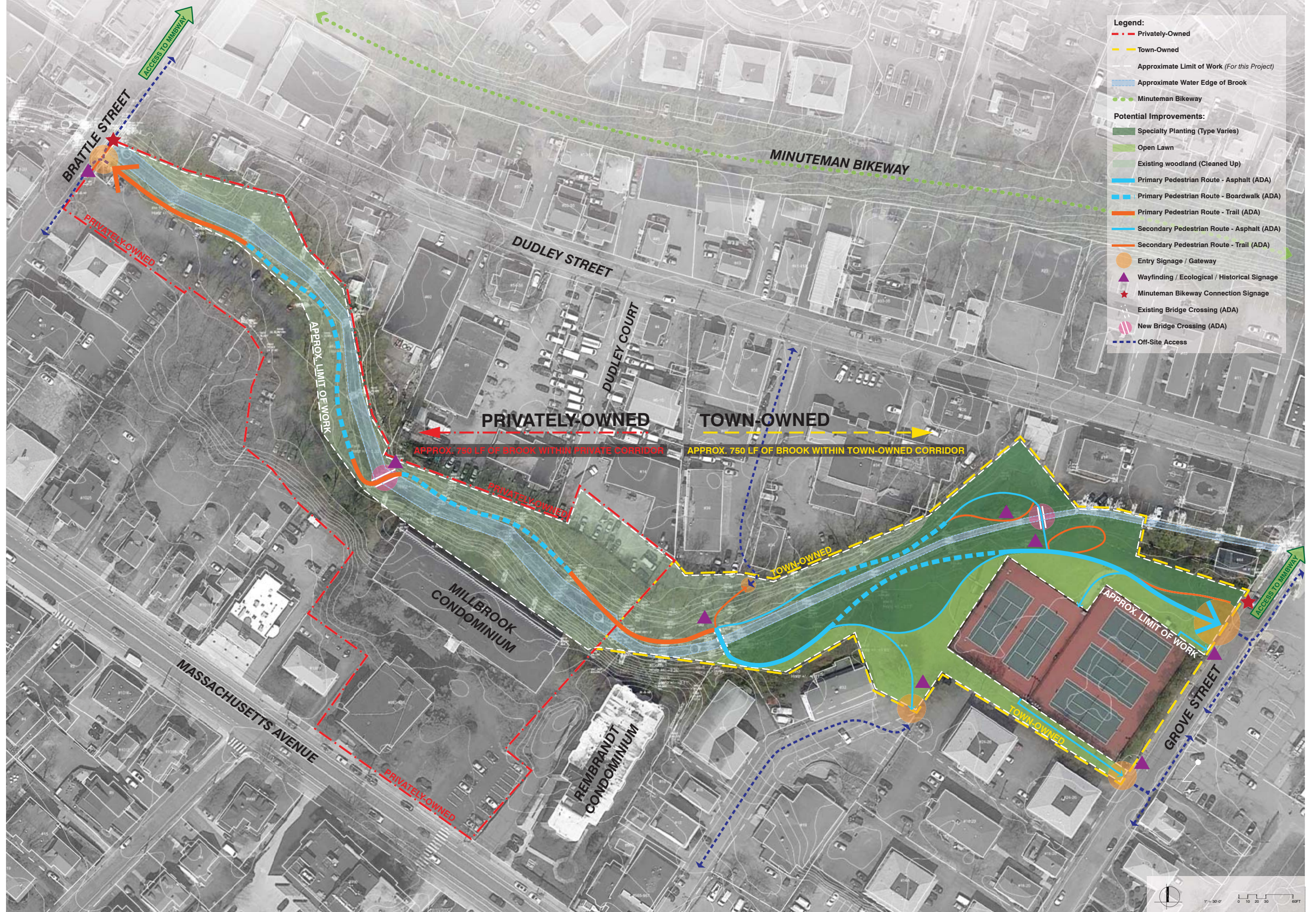


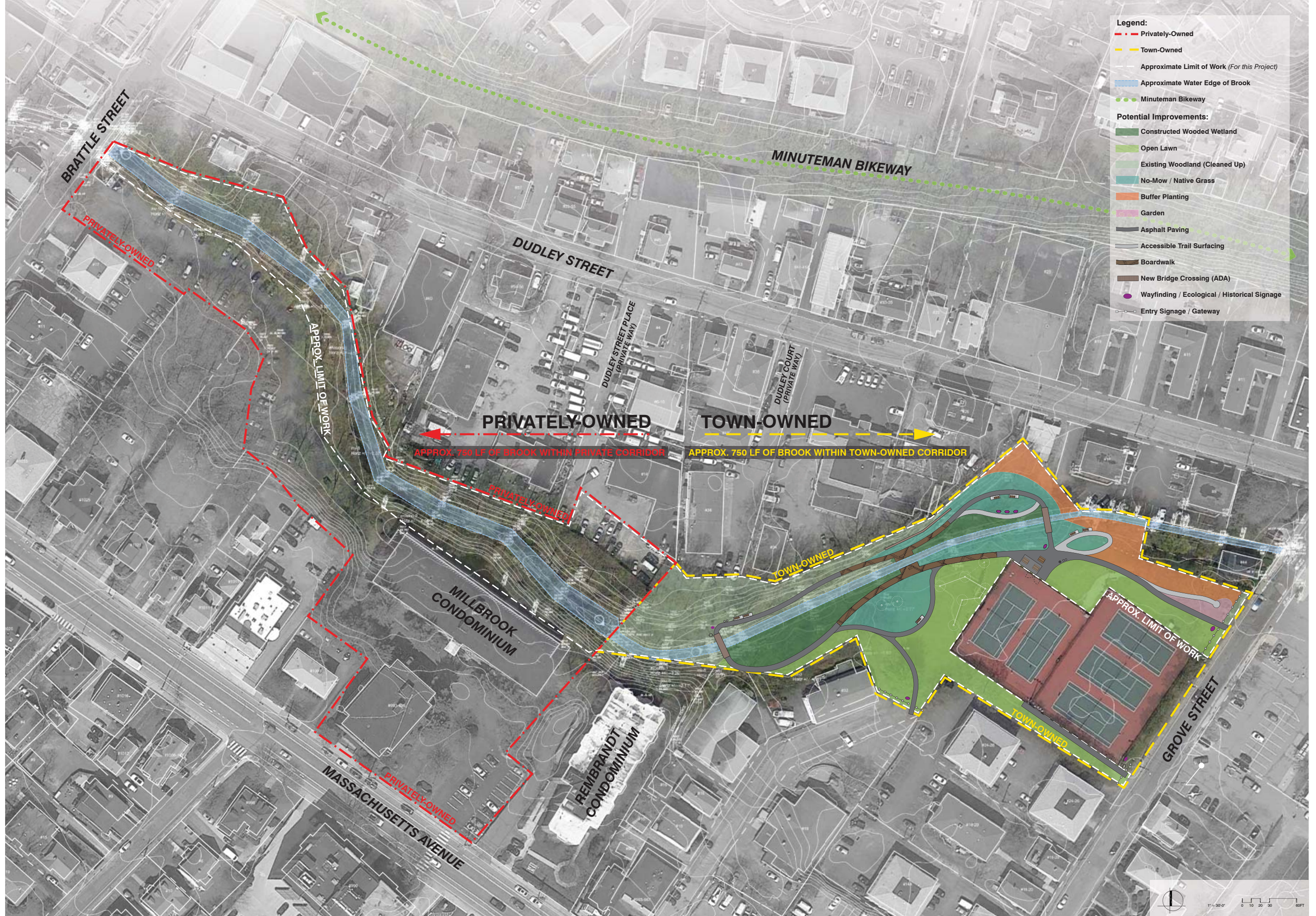
Mystic River
WATERSHED ASSOCIATION

EXISTING CONDITIONS ANALYSIS MILL BROOK CORRIDOR AND WELLINGTON PARK REVITALIZATION PROJECT 14 APRIL 2018 - ON-SITE WORKSHOP

Weston & Sampson
design studio







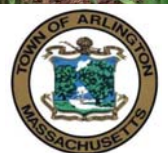


Mystic River
WATERSHED ASSOCIATION

WELLINGTON PARK - GROVE STREET ENTRANCE

Mill Brook Corridor and Wellington Park Revitalization Project
29 June 2018 - 100% Schematic Design Submission

Weston & Sampson
design studio



Mystic River
WATERSHED ASSOCIATION

WELLINGTON PARK - INTERIOR VIEW

Mill Brook Corridor and Wellington Park Revitalization Project
29 June 2018 - 100% Schematic Design Submission

Weston & Sampson^{SV}
design studio

DETAILED COST LIST - DRAFT

	Quantity	Unit	Unit Price	Total	
1. Site Prep and Demolition					
Site Prep (protection of elements to remain, etc.)	1	LS	\$5,000	\$5,000	
Temporary Construction Fence	1435	LF	\$6	\$8,610	
Invasive Species Removal	1	LS	\$20,000	\$20,000	
Tree Stump Grinding (24")	8	EA	\$500	\$4,000	
Tree Pruning, Clearing and Grubbing	20	EA	\$500	\$10,000	
Strip & Stockpile Topsoil (6" depth)	1630	CY	\$8	\$13,037	
Miscellaneous Demolition	1	LS	\$2,500	\$2,500	
Rough Grading (52000 sf)	6044	SY	\$3	\$18,133	
Fine Grading (52000 sf)	6044	SY	\$2	\$12,089	
R&D Asphalt Paving	241	SY	\$10	\$2,413	
Erosion Control Device - Straw Wattles and Silt Fence	1	LS	\$5,000	\$5,000	
Subtotal					\$100,783
2. Trail Surfacing					
Full-depth Asphalt Paving (3" depth) (7455 sf)	139	TON	\$180	\$25,049	
Gravel Borrow Base at Full-depth Asphalt (8" depth) (7455 sf)	184	CY	\$35	\$6,436	
ADA Trail Surfacing and Gravel Borrow Base (1560 sf)	29	CY	\$50	\$1,444	
Steel Edging (at Trail Surfacing)	593	LF	\$15	\$8,895	
Boardwalk Trail Surfacing	1690	SF	\$75	\$126,750	
Bridge (Pre-fabricated, \$65k x 2.1 installation)	2	LS	\$136,500	\$273,000	
Subtotal					\$441,574
3. Natural Play Elements					
Wood Fiber Surfacing	550	SF	20	\$11,000	
Nature-Based Play Structure	1	LS	\$8,000	\$8,000	
Landscape Boulder (Natural)	20	EA	\$300	\$6,000	
Subtotal					\$25,000
4. Site Amenities and Improvements					
Benches	8	EA	\$1,800	\$14,400	
CIP Concrete at Benches	36	SY	\$65	\$2,369	
CIP Concrete at Portable Toilet (100 sf)	11	SY	\$65	\$722	
Gravel Borrow at CIP Paving (8" depth)	8	CY	\$35	\$281	
Bike Racks	4	EA	\$500	\$2,000	
Picnic Tables - Large	3	EA	\$6,000	\$18,000	
Drinking Fountain w/ Bottle Filler	1	EA	\$6,000	\$6,000	
Trash and Recycling Receptacles	4	EA	\$1,200	\$4,800	
Signage - Type 1 - Gateway	3	EA	\$900	\$2,700	
Signage - Type 2 - Wayfinding	5	EA	\$750	\$3,750	
Signage - Type 3 - Historic / Ecologic	3	EA	\$750	\$2,250	
Granite Piers	12	EA	\$1,800	\$21,600	
Wood Guardrail at Granite Piers	56	LF	\$20	\$1,120	
Bank Stabilization (Wood Planted Crib / "Living Wall")	1	LS	TBD		
Subtotal					\$79,992
5. Planting					
Tree Planting (medium height multi-stem)	6	EA	\$750	\$4,500	
Shrub Planting	24	EA	\$200	\$4,800	
Loam and Seed (6" Loam Borrow)	2444	SY	\$6	\$14,667	
No-Mow Grass / HydroSeed	19550	SF	\$10	\$195,500	
Wetland Plantings (Flood Storage)	1	LS	\$10,000	\$10,000	
Display / Butterfly Garden	1	LS	\$10,000	\$10,000	
Native Buffer Garden	1	LS	\$10,000	\$10,000	
Subtotal					\$249,467
GRAND TOTAL					\$896,815
15% Bonds, Insurance, Overhead, Profit					\$134,522
10% Contingency					\$89,682
Design & Engineering Costs					\$54,600
Supplemental Services (Survey + Test Pits)					\$15,200
GRAND TOTAL					\$1,190,819

FUNDING SOURCES FOR IMPLEMENTATION AND MAINTENANCE

Parks:

EEA Land and Water Conservation Fund

EEA PARC Grant

River/Habitat Restoration:

MA Environmental Trust (~\$25,000 up to \$75,000)

Division of Ecological Restoration Priority Project (technical assistance, small grants)

Water Quality:

MassDEP 604b Water Quality Planning Grants

MassDEP 319 Water Quality Implementation Grants

Trails:

DCR Recreational Trail Grant

Resiliency:

EEA Municipal Planning Grant* (needs to prioritize alleviation of flood risk of Mill Brook)
(*awarded: municipal MVP Report, due June 2018)

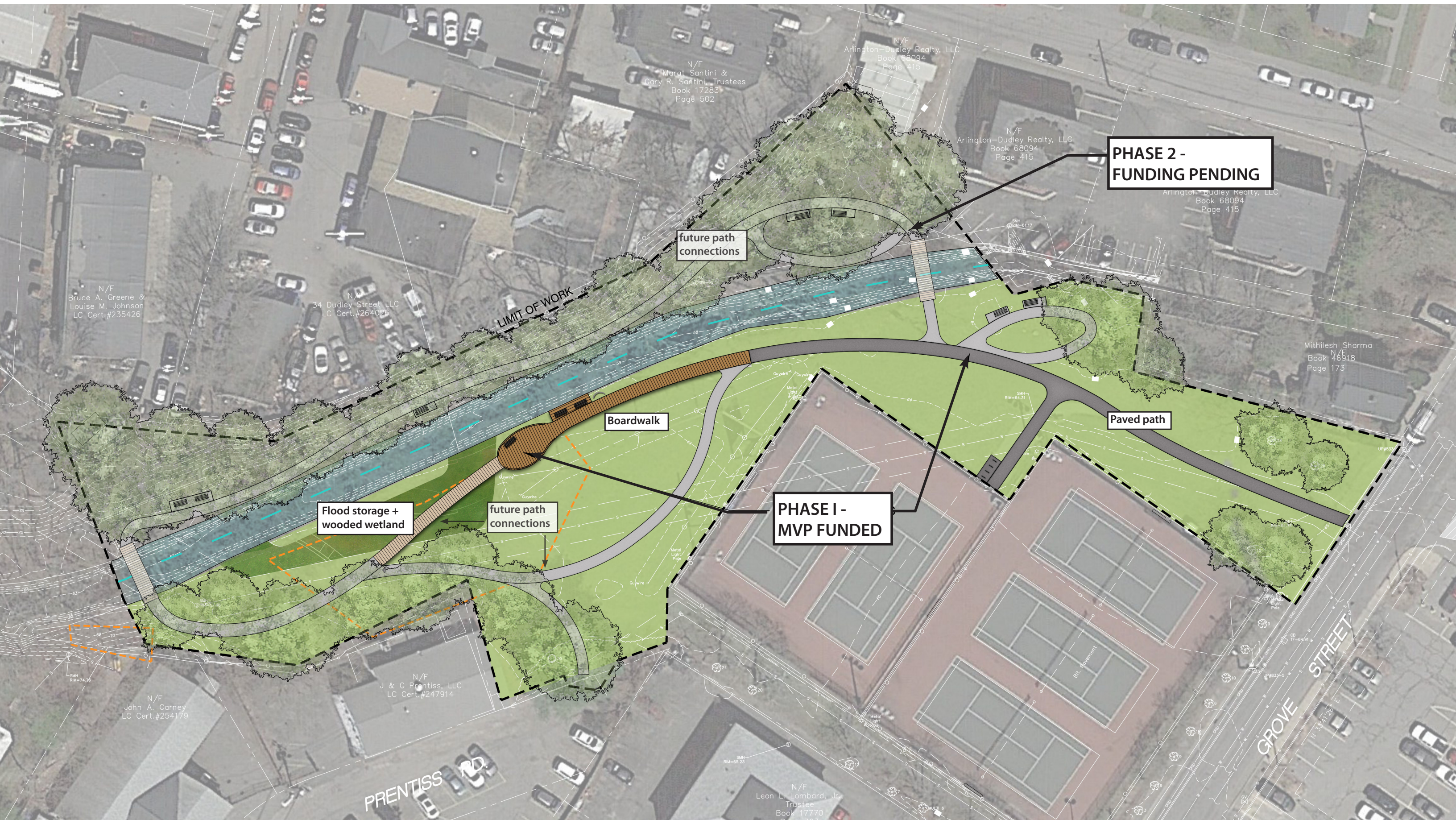
EEA MVP Action Grant* (prioritizes alleviation of flood risk of Mill Brook)
(* grant awarded to Town of Arlington May 2018 in the amount of \$399K)

Flooding:

FEMA – Pre-Disaster Mitigation Grant (municipal applications are rolled up through the Commonwealth; municipal Hazard Mitigation Plan needs to call out flood risk of Mill Brook)

Culvert Assistance Grant





WELLINGTON PARK PLAN
PHASE I (dark) // PHASE 2 (light)

MILL BROOK + WELLINGTON PARK - Outreach Summary

Abutters Meeting	January 24, 2018
Public Meeting #1	March 8, 2018
Open House/Meeting #2	April 14, 2018
Earth Day Clean Up	April 22, 2018
Public Meeting #3	June 6, 2018

TOTAL PEOPLE ENGAGED: 400+ (through meetings and survey)

Public Meeting #1

- Wayfinding / Signage - Minuteman, Mass Ave, bridges, ecological and site history
- Pedestrian Connections / Access - clear entrances
- Vegetation Management - knotweed problem and remove blockages in Brook
- Active Recreation - like tennis courts, maybe climbing wall could be better utilized
- Storm Events & Flooding Risk
- Site Amenities - benches, chess, vistas, picnic areas
- Want to maintain natural and wild feel of the space - more native plantings
- Maintenance - pervious surfaces & durability

Public Meeting #2

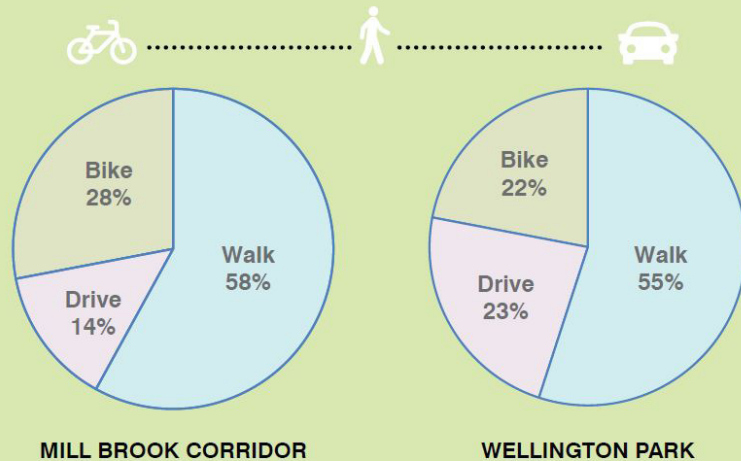
- Highest priorities: trails/connectivity & wildlife and water resources restoration
- Add a community board near the park entrance
- Outside places to hang out
- Water features
- Dedicated area for street hockey
- Connect with arts community
- Downstream connections to cemetery and Mill Brook
- Adult-oriented exercise equipment
- Increase visibility of Mill Brook from Grove St and Wellington Park
- Relocate adventure climbing structure?
- Signs with historical and ecological information and picking up dog waste
- Better pedestrian connections from Dudley St that could be upgraded

Public Meeting #3

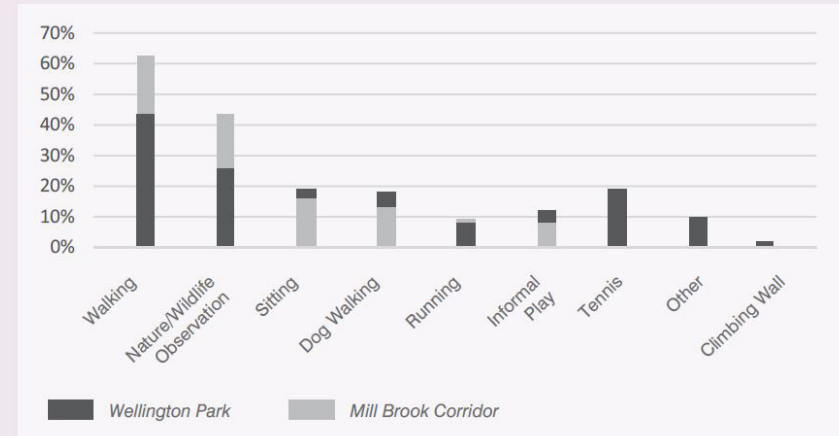
- Play areas - climbing wall moved? natural playground as opposed to bright plastic play areas
- Benches - seating for tennis courts
- Signage - historical information included
- Entrances - like the pillars; make Prentiss St a clear entrance
- Parking - limit parking in condo lot
- Privacy - concerned with grade of path by condo buildings
- Bridges - adapt instead of tear down?
- Planting and Wildlife - tick issue with no-mow? long term maintenance of entrance
- Flooding and erosion concerns
- Porta potties - enclose with wood, add kids porta potty
- Safety concern around Brook with kids

Online Survey Results - 274 Responses

Preferred Methods of Transportation



Top Activities / Uses



Visits in the Past Year

MILL BROOK CORRIDOR: 42% YES, 38% NO
WELLINGTON PARK: 33% YES, 36% NO

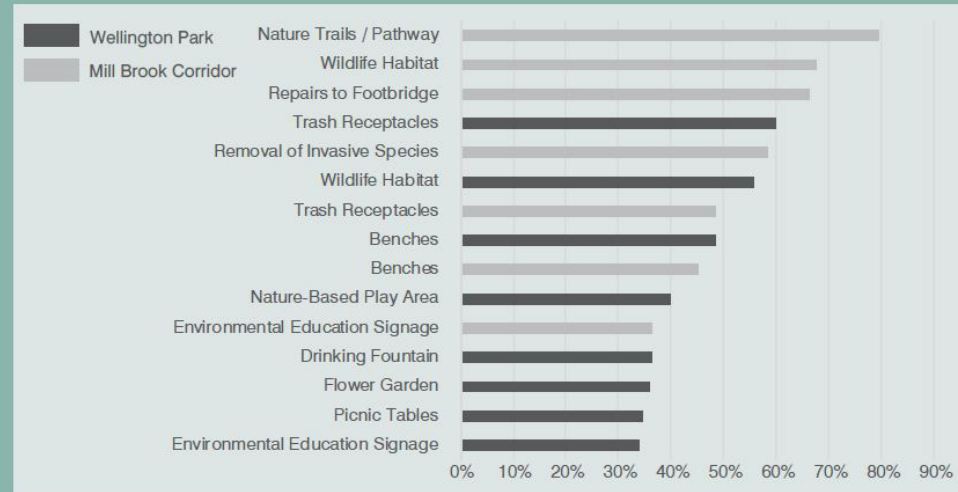
Seasonal Use



Biggest Attractors

43% NATURAL SETTING
21% OPEN SPACE/LOCATION/URBAN SETTING
12% TENNIS COURTS
10% BIKE ACCESS/WALKING PATH/BETTER ACCESS
8% NEED FOR CLEANUP
5% DOG USE
2% HISTORIC SIGNIFICANCE

Desired New Amenities



User Experience Key-Words

CONNECT *Cleaner* NATIVE PLANTS *Landscaping* SIGNAGE
 REMOVAL *Fewer Invasive* WALKING *Think* CONNECTION TO THE BIKEWAY
 BROOK WELLINGTON PARK PATH TRASH RECEPTACLES
 ACCESS WATER QUALITY TRAIL *Gardens* CLEAN *Racks*
 TREES FOOTBRIDGE *Clearer* BENCHES NICE *KIDS*
Picnic Tables WATER *Bike Racks* EQUIPMENT
 Street PARK Space NATURE TENNIS COURTS